

## RECORD

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58 .62

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#### Collection and Field Note Book

#### No. 32

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A BOORUM & PEASE PRODUCT

1952 marshall to ugelang fitter 3 Feb. 3 - Observations from along south side of atall. tainy terns, common moddies, Radly white crowned noddies, seen flying over ocean. Ujelang Islet - scrub or forest things along seaward side well developed except for try breaker Thin Stretches one on each side of the gap and through the dozinat trees. One complete grap in coconuts, one low place. Small Islet west of Ujelang! This, very low, scarcely above high tide, no sand accumulated, covered lling by scattered bushes and trees. Many turus birds flying over it. rule. Burie Islet - well devel to seaward ride. many re birds flying overit, green, Kornu Islet - has seril only, many birds flying mit

Einnelapp) slet Well developed frest
belt along seaward
side, Perophis on s. w.
corner, also some on east
passage beach but here
mised semb with
much Pisonia which
is yellow and defoliated.
forme birds flying over it.
Frose mixed serul on
lagoon beach, seen from
passage.

Feb. 3 - Rome Islet a flat of small broken coral surrounded by a gravel in peoble im slightly bigher than center . Broken coral blackened. This bar is of roughly the same shape as the !. outline but is shifted smewhat lagronivad. leaving the beach-will well exposed on outer beach gravelately inside it on Sida fallex walk. common in openings, formere low open scrub

Consiments Islet.

Love forest a screb

along seaward side.

forthwest spart is a

for forest most probably

Vemphis, with no coconuts.

Coronuts on inner frant.

Pemphis also on matheas

east passage beach

Kiningan Islet 
appears to be almost

entirely Pisonia forest

badly wind-beater (seen

from several miles).

lagoon beach.
Vegetation a spane
mixed serul, with openings,
should mainly femplies,
with considerable
messesschmidia, someonee
Pisonia too prenter seedling
coronals. In opening a
scattering of tufts of feptum
patches of low kidd serul.
One Boerhavia tetrandra
and a very few plants
of there chal.

flowers nange.

34142

Myelang atall

natives evidently
eat the noddies as
a large number of
winds were lying
around recently used
temporary encomponent.

Bag # 52 - drift seeds
picked up or beach.

Bag # 53 - pumise
picked up or beach.

Vegetation nicely good:
Outer felt on reg Englowents
is Pemplies frest about
5 m. tall, not especially
dense.
Inside this a belt of
Misses frest, of Justianly
messesschmide, Pismig
and Reaevola in the
outer fract of the boulder
flat. This gradually
changes to a belt of
friendinally shales
of Mainda and Justianla
in the edge of the covering
flautation also on the
boulder flat. The inner

Ujelang atolf. 1952 marshall 9.5. is leved with a part of the boulder sparse frohen serul flat is often commit of Leaevola, Terminalia, Glastation, with Flowing Messerschmidia with seattered landanus; Theunga, Polyprodium,
The patcher of thuanen and
Repturus and areas Triumfetty and Keptures ground cover. Hundreds of moddies of both species, affect a planted crook weeks of each seen nesting. squash, small back Fledgling white crowned of alocasia, locally moddies seem to get their white evous will before Canavallia. 7hrs fin-feathers appear. plantation extends to the lagron beach, which Leven wandering tattles seen in floch on outer roch flat. 7eb. 3 - Burie Islet on conal rubble inopen evenut plantation shrub 3 m. tall, sterile. "akungkung" 34143 Terminalia samoensis Red. ~ common along layour 44 Polypodium stolopendria Burmis fronds erect "kino" common in ground ever, especially around and on bases of cornut tunhe alocasia mannhiza (1) 511.018 plants 1.5 m. tall "wot" n"wat" one small fatch near dwelling 46 Canavallia microcarpa (D.c.) Piper prostrate vine flowers magenta "marlagi"

prostrate, extensive, leavers

flowers nange in ground cover Cucurbita maxima Doch. flowers orange with gran common near dwellings apparently plantey

marshall 9s. Uzelang atall 1952 11 Feb. 4 - Eimnlapp I set edge of plantation men lagron beach 5 50 Terminalia attigentis. Rock. tree 10 m. Tall, 4dm. Thick shoul 3 m. tall; fruit immature. common in sent Feb. 4 - Leroho Islet 51 albugo platensis parasitie on Boerhavis infected branches short, over. fortel. 4 - Kalo Islet 52 Xazlaria sticks black as though painted. very common on sticks lying on ground in Pisonia facit Feb. 5 - Jaisu Islet open coronit plantation near 53 Eragrostis amabilis (h.) w. a A. spreading trift, local patches carfitore spreading 54 Fimbristylis cymosa R.Da. local in sandy areas freppery och mjoj maroro" on base of quettanda tree on base of communt trunks adge of serub friest on coconut trunks edge of scrub forest

17

1952 marshall 12. Ujelang atolo 10 erect her & 2 m. tall. Cassia recidentalist. 1341184 flower yellow. fait o common around ruins fleds said to have been of Jupanese installation - coffee but a make me side. sterile. "buly, smals" 35 Hymenocallis littoralis Jacq.) Salole rose, planted. a show I m. tall; flowers 86 Clerodendrum iner (L.) Gaerth. white with maron oranimal strenty stamen, "whey" delant. Feb. 4 Vielang Islet Freach at extreme east end. orange color, powdery. 87 Trentapolia on bank of dead twigs of Camplin acidula, exposed & wind small tree 4 mitale. IN Vemplies aciduly Forst. flowers white, faintly locally dominant - fragrant "hungi" a "hengi around sandy wash chang 89 Thalama hemprechin (Ehrenh Asch. forming a dense sand at low trolo level an lagon reef flat bound sand embedded go Halimada striffinsa W.R. Tayla common on sandy bottom in bottom. below high tide level on 91 Canterpa urvilliana mont. (det. Taylor green, creeping. rase in sandy bottom just below high tide level on lagron reel flat punhish clay-lik man on noch flat between tides.

yelang stoll 22 1952 marshall 92. 1.6 \$34199 alsophyl Vices Timens (D.C.) struct , m. tall, one plant seen, edge of thicket leaves glossy, flowers - white. "kutah" "heda" 34 vos stenotaphrum mieranthumis 5 01 Stenotaphrum mieranthum sin. lave, turning radden, small colony in fren plantation near party "belo", flowers purple. Or pomoeg literalis 31. local along path wex 03 Premna obtusifolia K.B serve 2.5 m. tec, Commo scented when thicket west of me age, crushed; flowers light lagor side, small green. "kaar" splants appearing throughout village ving climbing on ground 04 Caravallia muracarpa (D.C.) local on path west of and over bushes; flowers marlap "marlap" village Feb. 7 - western part. comment plantation when o' me talf sterile. or condia subcordata fam. small colony in serul near lagoon back. 06 acca lemtopetalvides (L.) O.K. new leaves just appearing last years leaves and occasional in opener places fruiting stalles dry. "mokemok" tevers eaten stands grated and standy washed of 07 Engharbig chamissonis Boiss. v stems ascending, sup melly, glands green; local colony on lugury "pural" a "puripur" side in dry open and

24 1992 marshall 7. Preoris grandis R.B. common in trucky 09 undergrowth coverny har ge boulder in breistry lundergrowth and for from outer beach, wie local colonies along eigum beach 1 Hernandis somora L. one tree near layoun treach Tel. 7 legeland canty slight megular breeze Wet bruth 25° dry 27.1° C. Teb. 8 - Welang Welet, control part near village in count plantation 12 Pandanus tectorius Park. common under coconut, 13 Carica papaya L. occasional in village 14 Hibraria tiliaceus L. one small colony forming thicket in west of / village 15 Ochrasia oppositifolia (Lam.) K. Schu one wind besten tree on lagorn beach in village

should ris my all,
sterile hange"

light planting green

light light green

showers yellow (my),
"brile" the & m. talk, spreading,
sterile. "pingiping"

tree & m. talf. "Boy".

Many varying individual,

fruit an important

item of diet.

bedraggled wind-beaten

unhealthy looking

plants, bearing small

fruit. hore seen ripe.

shoul 3 m. talf

chlorolis sterile. "law"

wind-beaten tree, 4 m. ialf,

flowers white.

"kijbar"

Vial 87 - Ujelang Islet -The wearing spiders from undergrowth; and, small species from anat. hill near lagran beach terrestrial, large over running on growind meanty. Vial 79 - and strosophila attracted to deadling mollusks hanging in trees, house-flies around nating divelling. these abundant and ! annying Vial 89 - Ujelang! Humus animals from full of notting cornet hushs and stones in plantation.

Vials 90,91,92 - insert, attracted to light, wound camp. yelang Islet. Vials 93,94 - Rais (Daisi

Hob Vials 93,94 - Rais (Daisa)

I elet - dela cools, te

from well - old well said th

Story to have been

duly by the germans.

Vial 94 given to Carol Waile 4/18/32

Gag # 60 - coal pebbler from lagoon beach and in plantation on west end of ujelangs.

Bag\*61 - sample of coping from ling ing shed on Hjelang I. for phosphous, for phosphous, trace element, (moritue content).

28 1992 marchell ...

Kells Exect planted to commute except for a better. fort in outer airc east passage beaches taperi 9 off to send in inner end of east trassage beach. he outer beach is a steel boulder a colole beach out to a ridge at least 8" above brightide. This ridge extends innand as a boulder flat, gradually dimening in altitude for about outside the plantation is frested evett, Messerschwide, and with some fuetando and fearing. On the boulder flat and scalled wellgrown bearing and inverna coconuts. Beneath and petice. there is a dense thicket of Pipturus with some Pisonia, quettanda, etc. tangles enth themong.

Sunh shells are estemable pare. Carriel search revealed only I payfillide twhile same soit of rearely in surviva situations I'M which wilness, etc. would down wielded dozens in hundreds all this board other farmilies in same length of time. To dead whells to be seen in litter. On the ground in the in me half of the sait are exatted an abundance of fourmine better and coolins. Annual the sone hasper thind of each is a grobbly Cirning, as the de ins other folants . handle 459 in summittels most in. of these not measure, with frame feet dan per 50 Turnier is called tilen and the me bines on it is ordered some on the reserve

Enimoni Islet -Island one large mobile flat with many boulders. order portion mortly stripped bare of core material except for western edge of s. w. projection, which has some sand files my in a beach. a large area of this outer flat is completely unvegetated, doubtless covered by many brigh tides. Six, projection but still probably tides, this conered by a frume l'emphis forcet a thin stand with a few large but no very large trees, many of last should proportions. (cf. 1944 + 1951 photos). The norts of this doubtless washed by some high tides. mostly on Gare rock, gravel filed around nosts in a few spots Very few Menaschmidia on Mixed farest fringe come along outer edge of plantation.

West end with few communts - mixed front of Pismia, Cordia allophyllus, Brunalia, quettarda within, themplies on layron and passing bearles - This largely en boulder- woble flat! Onter part largely Pisonia, but edge, east of l'emplies stand! largely Merserschmidia The undergrowth is sparse mostly tree reedlings and Visonia sprouts. Some Polypodium. Coconut crabs, called "bard" live in burrows under boulders in coral mobble. The plantation is spane, with much undergrowth. of liftures, Mounda, etc. tangled with promoca tuba. of Thursea and Reptimes. Leveral small breadfruit one of papayor. One small patch of Wedelin in Then grove near lagon beach. Thered serul frest on east passage, wide belt. toose sent of bearvala, Messerschmidia, Gretlanda,

lagron beach.

In general the frest on lagron side is somewhat lower teran or
seaward side.

Einilas Islet - along seaward beach a narrow but tall and dense fring of freet, and quetter menschwidig, where outside the there is are platform with a of properties thetant spane l'emplies serul on it. idging the frest east Of this is a fewerola The stanfattermat the west end is at about bightide level, but will remoderate of one about 0.6 m. light of same material. same material argunes a dil further east there eruld be called beauty conglornerate.

701 word. Fit to congt. In outer part of plantation much liptums Randona, young Morinda, young Pisaria. ground over of Triumfetta land (huasea. truther inward part of the plantation is nother open, with ground are, of young Pilacoin Townfelty thinaren formen tuba. Chenings are much caringon's with lighting tangled with I former. (no Wedelia soen.) Much of the sparse part This way forme of I li execut trees are very de. One breadfruit tree and one large Calophyllum sen. along the Laguren bead in a redsomally continuous spores to dense tall server a low from of Messerselimides. fisnia, etc. ne large Cordinatrie.

Deach a leaf longer eate platform somewhat
higher than high tist
level is being cut away
by wave action and principally solution.
May no have entended
The langth of the beach.

Romer Islet - see p. 2.

Burie Islet - see pp. 4-6.

Small islet bet. Brunis

regelang.

for with platform

with little loose

material no beaches.

Scattered lang Pemphi

trees with Pemphis serve

beneath.

Last islet on r. so, corner-Very wind-beaten and defoliated Premia seruh

of of profile

1 wo next islets not visited - from distance lower like Pisaria frest or scrub.

heroles Islet Messerschmidin feaevola
send with openings
with Lepturus horne
gravel flats around outside
with very sparse sextend
Lepturus tufts Boerhavia
tetrandam scattered in
these flats and in interior
of enlarge. Outer half
of all loose material.
Common modelies and
Loose material.
Common modelies and
Loose terms nexting
together on gravel flats.

Colsan Islet slavard side. Remainder covered by broken sembol messerchmidia with some Pisania. Open orear, especially on une corners, with Lefternes and Goerhavia. some pathy bare broken well a few small coronuls. soil rubbly with some fine gravel, Grally some sand fitte humas except locally under l'isonia treez, when there may be an inch or 20 of peat. Common modales vesting on ground. White crowned moddies nesting gregariously in trees. Bleach-rock well developed along layour and weet passage bearies. Plants seen: Corona furiana Sida Brechavia Septema lisamis Acaenola Meskerschmide 10 1952 Marshall Js.

Possonibol Islet
Covered by Messerschmidia
semb witha gen small
Pismia trees. Three small
coremits.

Next islet eastward. 
Sparse of Messenschmiting
server one livening tree.

3-4 small coronuts.

Kilagen Islet .-Langely an ofren count plantation with quite a few young trees. Leplums ground cover Polypodrum, Jamoea Tuba. In inner beach, in front of house are two large Visoria trees and one Messerschnidia. On the southeast corner a give of small Pisning has been very recently ent down, leaving stumps Im. o me tall, which are already sprinting. The seaward half of the Wlantation is very sparse. Here a thick growth of,

generally with a few Touchers, becoming rochier outward, till at outer end is a hook. like boulder plat or flat - topped rulge about 0.5 m. light the thereton redge there is broken mixed server and of reptures. Some gravel on to feat top. ridge, along the west parsage, is about 1/3 the wroth of the island. It is completely covered by a frest of small l'isonia trees, lined along the passage with a narrow fringe of Scaevola dith thin Keplurus ground ever. The Promis trunks are up to ram. thick and spreed 1-2 m. afrant. There is no undergrowth except occasional Visoria shrouts. The boulder are black with an algal film There is much give gravel mixed with great between the boulders, especially in from the prossage. The boulder flat merger es lagornward, both in

elevation and malerial. with the sand flat, but the Pisonia forest continues

Between the Moring and their are two small bare sand born. each with a small coconut tree on it.

Rais (Daisy) / slet -Cornut plantation covers a roughly semicircular area west of center and extending out from lagon. This is nother open but with good carefuy, no undagrowth. growing locally some Triumfetta, Morinda strutes Camarallia. toil a rubbly sand. brown to blackish with hormus, covered Ez an inequal layer of cordent trash. Blennes more rubbly to servard.

46

On the lagran beach, extending from cornets to each end of islet, is a strip 50 ml a more wish of sand evered by server. The me of there to the western of has been cut over and commuts planted, rather recent. along the west parrays is a 75 m. wide boulder flat aved wily mixed scrub freit, of Messeschmidia, fearvola, guettarda and Pisonia, with Terminalia locally common. The county just enter the edge of this server In the seaward side This belt is wider, but The whole mortheast part of the islet has been cleared and is now your up wintered very much tangled with dead brands.

yplang atolf Ujelang Islet almost this entire islet at least zoni. tong in planted to coconit, at each end are small serub areas. along the seaward side for at least two third, the length of the islet is a boulder rampart perhaps 8' high. Westward this gradually becomes less firmounced and sandy. This is covered by Santida solid very well developed belt of fearyla a fearoly and messersalinidia Knowle this is a more ir less developed trough, then a broad ridge or flat of boulders. The though and onte part of the flat are covered under the commute. by analmost solid very dense l'ipturus Unichet. with some quettanda, roward sohe Athorinda Tangled with fromorea tinto and, in thinne forces, Wedelia. In places they is from material between the boulders.

49

1952 Marshall ?. Ujelang atol. very rolly trough attempt to accumulate organic smatter in fet, 'm' randyaniety, the whole bother still wit. extend transversaly a thicket of an are of 20 west not all the way Illavety deach. mostly Frenna, tangle about & the distance The lagoon beach from her westward, is lined by a belt of lampling from the village of the w, endy is an one That top of the beaching. is distinctly brighter (1-21) than elsewhere. It is the is a low forest, mainly is little undergrowth. ground ever mostly timbri. quettanda, on a cobble flat. comper. stylis, Carrytha and Volypodium. Where there are boulders about 1/2 the way from in this, l'emphis is willage to west end is an present in mixture arequotiene the comment trees are much lower with quettanda, some messenschmidig et. ( younger?) than elsewhere. The plantation in Here a solid stand of this end is nother, Pemphis extends from the stranse and is filled lagron in to the trail that with a tall south the island. The soil. varying to a low forest of heavoly, at least from lagon quettanda, l'isonia. traly way occross island. and foly producm. is five fine sand to a Lefth off 0.5 m. a 20 at least. fort varies from rubbly mo webs. to very warry. Westward from this heavand beach at it becomes welvier this end is sand, of again but there are which much has frequent cross ridges

blown up anto the rubble and boulders extend clear across island but love ally, exp. mean seaward beauty it is somewhat covered by sand. The seaward beauty beach is lined by a luxuriant belt of Leaenola with me foralized clump of Pemphis. Ihe west passage beach is a steep sand beach up from a broad flat of seed con element to their

is a steep sand beach
up from a broad flat of
neet conglomerate. This
latter is being preeled
off in slabs by solution
on bedding planer.
Dearly is lined by a narrow
scrub fringe of feaevola
and Pemplis.

Clantation has undergrowth quite variable, depending on the how recently it has been cleared ont.

ale areas of routher deep soil. Forme of open 7 imbrishyles-leptum-Exploses

on Komu, where wings

of at least 50 were seen

on beach where natives

had cought them for

55

54 1952 Marshall 92.

Birds on ujelang atol.

trigate birds - a few seen over some of the smaller islets occasionally especially late in afternoon. Just before dank 40-50 were seen on a westernmost islet on windward reef. Evidently root here. During storm on Kalo Islet at about 5 p.m. 4 were seen calmly riding out the storm, joined successively by 2, then 2, then 2 more, apparently coming in from south. There sailed in one position above the islet for some time then solided off to the east. Their places were taken a few minutes later by 4 more. During the day very few were in avidence. In marshallese called "aak" "it Crested lens - one seen in middle of lagoon, four commonly patrolled De lagron beach near east end of lijelang! one on Kilagen on lagorn side. all seen flying.

White- Engineed moddies feen more locally than common modely. Considerable numbers seen on Buris, some nexting. terent seems fundreds' nesting on Kiningan Islet. Merting gregariously. in many next, in single trees, or in small areas, largest about 20 x yd m. where there were bundreds of nests. nests of much more material, chiefly Messersalimidia leaves and more compactly constructed than those of common modely, but smaller in dimensions. Eggs and young birds to completely freathered out meshere in same colonies also seen norting on last islet on windward reef. On Cohan, gregarions nesting also noted. but numbers smaller. young birds for good. young develop white forehead and crown some and more conspicuously than commande Golden plover - "brolej"
been only in small numbers.
bers common than elsewhere.
H seen on Pohan I. on seaward
vert.
H an lugoon side Ujelang!.

Turnstone "but but"

flock of 11 seen on Enimoni seawaday.

on Einilage, lagoon beach, sparage

7 on sand flat in so passage on

Kilagen I.

9 on lagoon beach (viplang).

large flock on seaward reef flat.

Wandering tattler "kirig"
flock of seven seen on seaward
reef It Burie Islet.
I seen on Einilag, I on Enimoni
I on Kiriniyan on seaward reef.
3 on Ujelang, lagron beach
2 on seaward reef flot.

ristle Thighed curlend one seen on heroloolslet.

There seen on Enimonistet
on seaward reef.

The on Kiningan Islet, in reason seef, one on lagran side.

at least 5 in Kilagen, possibly 6, in seaward reef, passages, and in grassy opening, in seaward reef, passages, and in grassy opening, in seaward reef, passages, and in grassy opening.

Keef heron "kaga a kaga mottles white dark Kalo 1 Ujelang 15 Kilagen 2 filagen 1 Moring 3 iljelang 4 Michang 2 One gray (not dark bluish, but similar to gray individual seen on Las ) with distal third of wings white. Two of dark phrase ones seen in interino plantation. Chishen common. cochs called "kaki" hens "lolu" chieles "koen" a kon"

a few mandarin duchs.

Many pigs - "pig" a "fith" diverse breeds and mixtures.

rrats seen Rattus exulans, "kijirik"

lizands - mataloj" name applied both to large geen lyands and to shinks.

De Houseflies abrumdant called "rong" or "ron"

l'ortugese man-o-war - "laij"

Coconnet crab - "baru"
natives insist that it climbs executives. Turtle - "nen" or "soen"

Cocont crabs, turtle eggs. moddig eggs all evollet underground in a very primitive sort of underground oven - not iroked for mire than Is how, not very effectively. Exemut crab trasted on hot coals.

all islets where They are a significant number of community have been unhed over for copra recently. Rather little burning of trash seen, when Much accumulated and rotting.

Ujelang ital

Enimetry from the trought here December 1947. heaves trull them houses of paywood & corrugated inon, painted darl green, not very altractive.

Good coconut plantations but few breadfruit, fow frapayas. Many squash vine but rather frew squasher (cronhneck). some complaint that fewer fruits grow free than on Enilvetok.

taken off by last field try-

Outrigger carrier largely built of imported fring but with been of Pemphis (or hand drift-wood, zuch as a frier seen being fastioned. called "ibeli", looks like malrogany) (sample 63) Outrigger servag on windred side, mey at times mide out of water. Sterring partly tief by and to content come let drift to end where weeded. Simple cross filtings of Perophis, those where a troig is needed for a book of Messerselmidia. Wood wollers used to stiple carries up notally natery sails managed by 5 servit offer, soubled around cons filting, books, & most base mast slanted forward, stayed it forth and of cover angle of lotter sail for end a end of com and reversery shart of

and very narrow + deep,

Ujelang atol bottom Engitudinally very convex. Ride, lugh in water.

hh

Teb. 12 with latet, carry 7:70 p.m. scatteres male clouds, gentle breeze wet bulb 24.9° dry 25/9° C.

11:40 p.m. more or less clear overhead, heavy clouds around most of horizon, up to 30° wet bull 24° dry 25:3°C

Feb. 13 with slet camp 7:40 a.m. slight overcast, clouds on north lorigon up 20° c.

7 cb. 14 Worthofslet, camp 8:20 a.m. heavily overcast gentle breeze wet bull 24.8° day 25.5° €. very slightly overcast very slight freeze wet bull v6.6° dry 23.4°C

11:40 p.m vey lightly overcast. slight breeze vigo dry vi.9°

17 eb. 19 houndly oversast vet bull 24.9° dry 26° C Bag sample # 64 - difft seeds from worths att

With atol

Bag sample # 65 - litter from ground in soularnes -Leaevola scrip frest, Wotho Islet - for land shells.

Vial #97 - bottom layer miscellaneous spiders from Withol., 3 sp. of ants from a hound bush in cornut plantation

Vial #93 - ants from large terrestrial anthill in opening in sent frest, w. section Woths set. Other animals from Soularney-feavols . soul frest from on and under Kylaria-covered sticks. Live smails (except long yellow ones I were on the sticks, yellow ones and surface of ground. for wend with I sled,

4 otho atol marshall /2 1952 prostrate, flowering 34274 Vigna maring (Burn. 4) Merr. U branches exect; flowers abundant locally nellow. covering greened in Mantation near lagron beach Tue ted, ascending of 3) Deusing indica (L.) 6 zertn. evert. occasional around sweetings show 3 m. talf. It I senderanthemum carmtherini (sean.) give white with maron planted around thouse dotted throat "went ting 37 Foryprolium scolopendria Prog rhizane prostrate, superficial or slightly common locally in buried, fronds erect. ground cover in plantation climbing onto bases of communt nees .. prostrate, flowering 38 Thuanea involuta (Forst.) R. d.S. franches every. common in ground cover in plantation near lagoon beach 39 I pomoca thing (Schlecht.) Jon luine, extensive, forming mats and about Common tangles berwers in plantation in ground white willing in cover and climbing in undergrowth. - outlinger. elect tufts 40 Digitaria microbachne (Pres) Henr. V orrasional in plantation should 0.4 m. tall, leavergreen, 41 Sida falla, Walp. flower range withouty planted around houses The faintent touch of spiritaneous in plantation red in center.

old leaves and scape, mostly dead, new ones have not appeared yet. "mohemoh" tubers used for food. bluck

dark brown.

pale bluid, green.

small tree 5 mitally.

orange red above, vermillen. beneall.

when broken, leaves not very glossy; flower pale green.

strawling, aromatispert, rays yellow.

Worthy alogo 1952 Marshall Dr. 34293 in erect tree trunk in first 55 Elsing in fract parasitis on almost dead carrythe filiformi, Vial #99 - bottom layer small ants from line
running up and down
Pandanus trunk.

Typlayer - larva and
orb-webser from merseischmidis
on beach at west point of islet.

Woths atol 1952 marshall Is. 740 tel. 14 - Woths Islet vermillion beneath. Polypous annabarinus on old stone-lines path bluist, green. on surface of mud in bottom of weedy tars pit 59 7 imbristyles cymosa R.Br. locally abundant in moist bottom of in weed tare pit peppeny odo. 60 Cyperus oderatus L. loss abundant in Cyvinspenny merkusii (Hassk) Schatt muddy totang of all bT) Milosy plants 1 m. tal, sterile. weedy taro just 61 Cyclospeng chamissonis (schott) Men planted in maddy tano fret W Ochrasia oppositifolia (Lam) K. Schum. tree # 14 mitall, pure stand over targe 15 cm. Thick unbranched to near toliff teaver glassy; plowers white, fragrant; fruit immiture, yellow and get with Thin plesh twhen right, stones abundant on ground, cleaned by insects and cracks. It Hofres on nothing shesselschimidia

Marshall Iz. Wotho atoll 80 1952 small spreading Pisonia grandis R.B., tree partially leaflers. Common in mixed flowers green very scrift frest on boulder ridge, also scattered fragrant. in other types of fruit. tomes on notting Messerschmidis 65 log om boulder flat. black nodules on coral sand in ofpening Bag 66 - Purice from Bag 68 - soil sample from top 8 in ly roots. Bag 6.7 - fing material for land shells. teb. 14 - Wotho I sect, west point on lagorn side serub frest 66 Carrythy filifornis L. flowers white. common, pararitis on various should This on tealvola. small tree 4 m., leaves 67 messerselmidia argenter (4) polines. common is along and fleshy, silvery green; flowers white fragrant. near beach.

Wotho atol marshall Is. 1952 50 tree 4 m. tall, sterile. 34268 Pisonia grandia R. 37. common in small spreading he 69 toularnes amara L. 5 m. tall, flowers whitish "kabijiling" common, dominant in Veiller. grants of interior main som flooting 70 Transetta procumbens Forst. franchez erec. and inofen anne. openings. tifte with long stolens. 71 Leptures repens (Forst.) R. Br. dominant in openings tufted 12 timbristyles cymosa RBn. common in themas flower yellow. Wood not biller. 7) furiary maritimal. common along beach 74 Jerminalia salvaensis kech. rare along beach should am. tall, 75 ocaevola frutercens ( mil. fruit white, fleshy. de very comma along beach also in semb frest. show in tall flowers 76 guettarda speciosa L. white, fragrant; dried fruits, cleaned by common generally trabe, very abundant on ground. Vial 102 - animals from beneath same log as Vial 101. Vial # 100 - insect, attracted to light, around carmy. Vial 103 - earthwarm from soil in count plantation. Vial 101 - earthworms from ridge ! nothing Ochrosia log in Ochrosia frest - actually burrowing Vial 104 - termite caught flying. Alies cought in plants around tars pit. in word

Vial 105 Orb weavers

from mixed free to and
Oxforming from other
animals from floor of
mixed freet, under
allophyllus.

gar #9 - fmall hermit I crales attracted to Personuts around carny. Large neg one careglet journeying toward sea, apparently of lagence as lawre may be recovered from sediment in bottom of jan where they settled in large numbers on addition of alcohol. Lizands Aught by native boy - green ines seen mostly climbring tree, strengs mainly on ground. Two large hermit water in cheerecloth are from near center of worths Talet, inhabiting coconut track. probably distinct from large red species. funderal from same place - purple in color. Claws missing. Judging by holes, must be common all over islet.

and saw I dank

phase reef heron and

Instite me, there a

in plantation, also
a bristle-thighest unless
which lighted in

an opening, closs

enough to be positively
identified.

Two turnstones on

lagoon beach.

wotho atolf 1952 marshall 1. 86 tel. 15 - Witho relet prostrute stems red; 34277 Boerhavia tetranda Forst. leaves white frementh. in scrube sandy soil 78 Crincian protoning conex Contaction A. Dr nech 3-4 dm. high; scapes very slightly compressed, small colony and abandoned tano pits in center of island edger round; flowers white with manon framents and styles. tree 12 m. tall, flowers 79 O chrosia oppositifolia (Lam.) K. Schum. "hejbai" (word sample) prine stand over large area seaward of center of island tree 12 m. tall, conspicuously 80 Pandonus tectoring Park. proprooted at base; rare in ochrosia frest fruit yellow, from flavor. on outer third of islet, bop erwan" not eaten. blush green. near center of islet black crust, breaking and curling. on surface of soil in sparse scrib friest of forlamen, traceroly, etc. lead-gray calor. 83 auricularia on dead branch of Monenchmidia

1952 marshall 12. Wolles total atolo 88 factial 20th Another Rayer " 2 not too alrespy Feb. 15 - Wotho seet themseteen Wa very compact light partial soil profiles from Ochrosia frest just outside middle brownish gray fine (108R-6/2 -7/2) from of islet (directly back of church) nulble: only ducy Partial profile # 69 about 8" into this. Two layers: I famples for culturing fungi and bacteria). Layer#1 0-1: dark gray (104/R-4/1) fine mbble (myth 19-1) full on west to of the islet varying to fine sandy Soil samplette - surface loan (sample 69-2), the two not arranged in firsolites i-3 mm. diam. definite layers through It the loan tends to be about like shot, I"deep, lower in the profile. of fine light brownish gray (10 YR-6/2), from (profile almost dry) the rubble love, friends under young counts. the evan somewhat Partial profile #72 compact but fraible same locality, in very ( sample for bacterial and fringal culture). Trans. rather alregot ? small offening in serul! I very spane cordinat plantation fayer \$ 2. 1.0-3.0'+ very trale bown (10 YR - 8/4) sand. with beavola simb undergrowth) quite friable (sample # 69-3) Three layers: (profiledry) Layer 1 - 0-0.3' gray to Partial profile # 70 (lagornon) gray-brown (10 /R-5/1-5/2), loose from # 69 near edge of plantation) orbitic structure, silly Layer#1 - 0-1:0 dach gray texture, many rout, (Lample #72-1). (10 YR - 4/1) fine provdery ban varied in places with Layer #2 - 0.3 - 0.5' light gray brown (10 YR - 6/2) small lenses of light colved sand. (Lample # 70-1) silt the compact but

stuffy when crushed betieven finger, ferd living wolf, some dead my. (sample # 72-2) Fayer #3 - 0.5 - 1.8 (+ same material probably muit deeper - felt same as fran as machete reached into 1). pink (7.5 /R - 8/2 - 8/4) loog sand, few roots. (fample 72-3) i (samples for franque + bacteria culture)

Vial # 107 - flies attracted to pandanus fruit # 34 280 also beetter and ants and mealy bugs unhabiting this · fruit; large block ants patrolling neighborhood in ground.

Vial # 108 - earthumme from comment trash at edge of, Oshrosia forest. (many in wood of very rotton coconut trunks).

Vial # 109 - animals from same coronut trunk as \$108. and termity in galleries in close proximity. "air of scorping seen, but male (?) escaped. Larger cortivaches excaped.

Birds seen on Woth Islet.

with atoll

Crested tern - two seen flying over bay on seaward side of islet lighting and resting on exposed boulders and preening feathers. Black crest very visible when at rest.

Common modely usually some to be seen flying verled, Maria Jana Jak Considerable number along seaward bear. they till tainy terms to be seen generally over thin scrubby finest of the state of th and near beaches, but not more than 9 frew at a time.

trapate burd - one seen sailing ver outer beach, estirely black beneath.

LACA

golden Plover - kolej "
several seen in small openings in coronato, around village, and on beache, feen with turnstines.

Turnstoner. small John. Of r-y seen on lagoron beach and on bay.

Wandering tattler - one seen on boulder beach on the west friend - end of the islet.

Bristle-thighed curlew -Orasimally seen flying usually very way! feen to frequent small openings in interin as well as beaches. Two seen at close range in openings. Large droppings filled with stones from deaevola fruits seen frequently along blackes and in openings, probably made by curlews. Call heard frequently day or night. Legs a blue-gray colos.

Reef heron - 3 white mer and one doub (annow) seen.

Watho ato

Chichens "van"
Drichs "duls" (mandarin)
Cats
Olog.

Rats "kizirik" R. enulan,
quite common in serul
and in plantation around

Coconect crab "baru" big brown bernit crab "oom" scapion "kallep"

coconut trash

91

Feb. 12-15 slets except. Woths Islet seen only from boat in lagon and from ship dede outside.

Begin Islet - woodled forbably with Bankanies.

Worban Islet - wooded, probably with Pisania, with a few evenuts on westend.

Thedyann Islet -Well planted to cocunit weed but with woods beneath, at least on south side.

Ombelim, Eirele, Jebanau, Udity, Erodyemain and ancherudo Esteto wooded

fand spits along east reef have a narrow strip of souls.

Alet west of Witho 9. - rather low sparst y inequal first, prob. Messerschmidia with other things, slopes off to windway scattered clumps of evenuts, soul on both inner corners.

Feb. 12-15 - Woths latex

the western part of this relet is partially separated from the larger frant by a large bay of The reasoned side, running up into a sandy reentrant that extend in almost to the tryon. comy the entire lagron court of the islet is a broad kow ridge of sand, several feet above the general level. The reentrant topers out into a manino shallow channel which become fainter lagronward and disapplais, shortly before reading the vidge along lagorn shore. the reentrant is Nace in center with a belt of spare such along edel side. This is composed of Suriana. Scaevola guettardy etc The north beach of

the smaller month section

of Water falet is a boulder

beach running up

into a well developed

woth stoll

boulder ridge, tracked by a broad boulder plat at slightly lower altitude. This flat has share mixed server of fearens quettarda Luriang, co. with scattered trees of Messerach midia and especially Pundanus, extending some distance in merging with the sent mest. The boulder flat as it gets further from the rigge, especially on the east side has some sand between the boulders. There are ofrenings with Leptune and Eassytha in the server. The need has har a layer of course freeig, well consolidated, being stripped by solution along bedding planes a unconformities and subsequent ware action, from a previous solution surface (?) an friner grained rock, exposing Old solution basins (?). Boulder beach browles around froint and runs frant way down passage beach to main course in it.

The west point of the island has eparse the ever of coronate, with Rivering Leastory Mencialinidia from forelance Trettanda with seems story with spering with Leptierin, some Firstylis and carrythe. Same thing further in But lacking commute. no ground cover except in thinner places where it is similar to that in ofrenings but sparser, and occasionally under howland Trees, where readings form a carpet. Messerschmidia very som drops out, Loulainen becomes more abundant. Finally sout for server freet is soulained and Acaevola. pear centering a pately Aprile October Soil a from sand ridge along laguen alrhost to center is a fine gray silty material (nee Profile #72), quite deep. Near center is a patch of Dehrosia frest, almost a prace stand but with

a Wortho ataly

94

small admirature of Pandanus and Preming. Ochronia seedlings abundant. Here the soil is a coral nubble. frieces nother small. Bergund this, again a fine gray soil with same visit frest as on west fromt, with Intria added. This changer close to the channel on the east become to sparse with more commits they werenzy scrib of feaevola huvery, some Terminalia and Mererselvanista. Outer fringe of this mostly furiang. gravel flat beyond this is bare, with a rent furiang seedlings con to seril, many fearning seedling further out in channel. Amall Islet beyond

narrow channel has a arrall dry coverunt grove, offen betneath, surrounded by sparse

quettarda, Pandanus,

and fenerola. Very settle

1952 marshall Is.

Bush of this and of lours in village is exemut plantation with a mat of bedering. Back of this to tangles The should of Morinda, Pandania, etc. tangled with Wedelin Canaralia, fromoentuly ex. In village ground cover is Vigna, Reptures, Thursey Erage breakfuit trees. Village consists of a long stone-lined grate with houses at very wide intervals on both, sides. Those on lagory side are upon the sand niclas. Back, along the sandy restrant is a serul belt as in the other side. On southwest shore of way as ing belt of small sand dune. On exact south ride is a sandy belt with scattered small of Porolithan. The beach

here is somewhat shingly.

along the southeast side

muty tall stungs chen trumbs, linebel only mean loty. Canopy complety. Fro undergiony 2 carpet of seedlings fruits. Loil ging gray varying to fring rubble. ( Lee profiles 69, 70). freally they are south light on photos, when the German is yellow even dying. Their . no evident meason forthe. Where there is any trote in the canopy, the seed lings are much Boulders are sparsely and This Between Gorent. The center of the island trough, and ridger, most likely ancient tais pits. much treadfruit here some trees even in bottoms of pite. mostly the forts are dense tangles Spillerustendrum Vigna. Actelia Canavalfia, Homoed, young Pandanus.

freely sports have been cleaned out and contopiening planted. The forthern is deep wort much in they places. Cypenis and findrickylis tend to choke out the cystocherma.

The Orbinsia forest assumed of the original confronent of the vegetation. Otherwise it is trank to account for the free stand. The trees are not large, but there is little else. To have produced such a stand after a Cearing would necessitate a means of close sowing of the reeds and of eliminating all competing species. Over long periods they might well be eliminated but it would take at least the lifetime of the longest-lived.

lejae atol 100 1952 marshall ?s. flower treads brillians 34274 Josephrena gloring -. magenta. planted near house, rare. strub 2.5 m. tall; coare 91 Pseuderanthemum corruthersii (Sean.) guil. von. green: flowers white with planted near home counthwii. maginty dots municipality \_ in throat. small tree 4 m. tall; 1 96 Plumeria nubra L. planted near brown flowers white with years center, very - fragrant. tree of m. Tall screen hat 97 Hibiseus tiliaceus L. chlorotic. one tree seen in village 98 Centella asiatica (L.) Will. stems prostrate, losal in grassy places - worting at nodes. aling the path small tree 5 m. Tall. 99 l'iphones angenteus (Font.) Wedd. one tree seen in coronut plantation with erect flowering. 347,00 Thuana involuta (Forst.) R-45. common in grassy place. tranches. sprawling aromatic 01 Wedelia biflag (L.) D.C. hert; flowers yellow. common undergrowth, in Eccenit plantation Cyviosperme merkesi: (Hasski) Schott hard. 02 Cytospena chamissoniz(schott) men DHN.colon (45) 6/1798 cultivated in small we much-filled fits. chlorotic struct 1.5 m. Tall; 1) Citrus aurantifolia (christin.) Swingle? sterile. one small bush in morat pit. show 0.5 m. tall; flower 04 kida fallas walp. crange with no tras local in opening of red in center.

ugar aloll marshall I. speading trifts 34305 inaquestis amabilis (1.) U.LA. V common along drather Dr. Phyllanthus minuit. common along fraths and about divellings. prostrate clark 07 Emphorbia prostrata fit. mapling of sen. wiemmon along traths prostrate, fleshing 08 Portulaca oberaces L. trapto green. common along fraths 09 ileusine indieg ( L) gant. common along paths and in waste place Trifits 10 Cenchrus echinatus L. locally common along trathy and in wante place sterile, young plants. 11 Erinem rumphii Men. ? planted about dwelling

Feb. 16 Breh Solt

Vial 110 - Halobater evidetes

from stem of slid france

just ontirele Good Essance

attracted to strong light of

night. (see Macheil #922

for other animals collected

ext same time).

Feb. 17 Bock Islet

Vial III bottom layer act.
from colony at base of cremut tree under dry back at top of worts.
Top layer-insects attracted to lights in camp.

Vial 112 bottom lager.

coch wacher in hierary
filled soilin living forest.

top lager - insects attracted
to lights in camp.

Vial 113 forthom layer
ante from colony in very
coarse rubble in Prisonio fort.
top layer - ante and teimite
from same dead stupe
of living the on season
beach

Vial 114 - bottom layer orbivation from feet out of frantation, other aminate from a set of standing to the standing rather trunk from a policy trunk from a frest.

100 - 4

Myas along

Vial 1:5 - bottom larger ant from line numing who and down fruttanda trunk on me meth beach.

Vial 116 - bottom layer anto from Tablin can for they and species from Boerhavis flowers, beetly and ging jeg on.

ujas atol 1952 Marshall Is. 115 114 1 mil + 24 mil Feb. 17 Norde I sect and the trade of the Pisaria frest the deveny and commitation moler lang linning Legion beach - #75 there is a sohal arrount of peat accumulated Passage beach - # 76 in the surface of the mobile. ( really neef rock Rocally are colonies of beds down dily) Outer beach - # 77 white-capped modelies from expoliating waters !! nesting, producing re reef rock Thin accumulation of grand on surface. The preference was beneath the peat both where there grans from begreater is greans (sample # 73-1 next of white-calified is preat and greans, 73-2 is moddier, on leaves pebbles from bottom layers 101+ 5.9-6 (ctests 72000). of peat) and where they on and rock p.48 (com) is no quano visible at present (#74-1 is peak # 74-2 is helder from Punice found on boulder flat - tample #80 lower layers of peat last The peat is 2-5" thich. another similar sange Vial # 117 - insects + spider collected around lights freat firm spray, ver dark from, pHS, no visible quand on suffer in camp. (7 el. 17) Sofplent, nearly great (gample #78-1) fresteller (sample 73-2), firming sample but light from friable fresty soil 6" in work deep, very gittle visible quant - soil Cranfel 79-1) freffles (79-2).

Ujap atoll 117 1952 marshall 2. Feb 17-3 - Book Islet 34312 Xylaria on sticks bying on flow 13 Xylana on streets lying on 14 Thesserschmidig argenter tree 6 m. tal (other much taller; leaves common around periflery selvery green, fleshy. of island, this on outer beach. tree 8 m. tall; leave 15 morinda citifolia L. glossy; (wood sample) inside commit plantation tree 8 m. tall; flowers & Guetlanda speciosa L. white, fruit immetare. in mixed forest inside ( wood sample) outer beach, common. tree 20 m. tall 25 cm. 17 Intsig bijuga (colebr.) Kts. for from outer breach, thich tall trunk branched only near top: Leaver gloring, dach green, upper ones met mature; steril. (nonsport) forming groves. show 2 m, tal cothers 18 healvola frutescens (mil.) Kr. taller, flower white, very common around fruit white. fresighery of island, especially aling outer beach liang, stems to 3 cm. thick 19 Canavallia miercarfra (D.C.) Pipi climbing to top of trees; common in fismin frest flower magenty, frods immature. prostrate, forming to Brenhavis tetrandra Forse. thin mat; leaves while soll; occasional colonies or outer flowers find, stamen = -4 in thin place in woods on same tream.

rijae atolo 1952 Marshall In 114 prostrate with 34321 / numfelly procumbers Forst. v tranche, flowers yellow. vecdsional in edger of mixed freet along duter beach lead-gray in color. 22 auricularia on dead trancher of siving messerachmilding cause assumption of 23 albugo platensis endensed erect tralix grandsition Boerhavia tetrandy of infected branches. on Alesserschmidig trunk, mixelfret on quettarda trunh, mixel frest 27 Findristylis tuft, leaves not stiff in coconut plantation in sandy nubble, north end of islet Migene prostrate. 28 Polypodium scolopendia Brun. f. 4 sandy rubble in arount plantation, north end of islet common breatly. leaves pref beneath; blowers greenish. 27 hupharia chaminsonis Boiss. local on sandy places in end of islet. stem yellow; sterilo 30 Cassytha frilifminist. very local on grazry spot on north end of aslet 31 lerminalis samorensis Roch. the sprawling tree common award peripting tall: fruit immature; of islet. (wood of sample)

Ujal atol 1952 marshall Is. tree 8 m. tall; starily. Cordia subrendata fam. ( word sample) small colony in mixed frest on s. e. come of whet en boulder flat. tres 8 m. tall; flowers 33 allophyllus timorensis (D.C.) Blume v white; fruit red. common in mixed freet ( word sample) on boulder flat. tree 5 m. talf, turistep. Pemphis acidulg Forst. Trunk 4 demethice in y small group to south granted, florer 2 passage beach, on boulder flat - white. (word sample) should (m. tall). 35 Luciana maritima 6. flower yellow. one bush shengeron beach, on colober may I ghe 6 m. talo (other, 25 m.), \$36 Pisonia grandis R. Br. to to some have old leave, 1377 Pisonia grandes A. Br. others young new me. dominant is codominant flowers fragrant. tree on boulder flat Throad sample) "kangl" 38 auricularia andresten Pironia supling mange, powdery. 39 Trentepothlia on dead brancher of Pemphis expresed to rea on rubbly ground in evenut plantation, local. stems flesby, searcely 41 tlenza moleralis gand. common on rubble flats in evenut plantation 42 Xylaria common or sticks on floor of l'issonia frest

Ujas atoll marshall Is. 123 young tree 1.5 m. tall, stail. Calophyllum inophyllum L. single plant on west moly fiarrage beach single stempeles, with 44 Carried prapaga L. eroun of leaves; flower several small dumps near - cream solite. in center of island resette 2 m. Tell; 45 Crinary rumphii Mir. scapes duced up. small row in comment plantation not franchem lagon beach, partably 46 Pandanus tectorius Pauls. prynamical trep 10 m. tall, fruit heads common in coronat rather small. plantation, this tree at top of laguer beach Total sole selet, Feb. 19 - reef flat in Bock Channel, on to under sides of loose boulders. Taylor 1955) soft, fleshy drupe like from serses convex distally, torsid bod dull green. Taylor 1955) bright yellowish green. 47 Caule pa racemosa (Forssk.) J. ag. (det. underedges and in enerces between boulders, below 486 Caulefre Serrulata (Forsok.) J. ag. (det. 486 under edges in ellenfre on bare bottom, and between stones, below low tide level. whilish, green. 49 Halimeda common on bare bottom and between stones, below loved green, curved planes. 50 microdictym okamurai Setch. (det. Taylor) green, featherlike branches 51 Cauderpa arenicola Taylor (det Taylor 1955) from excepting thistone below low lide

Vial ## - Caterpillars
from messerschmidia,
Spider or bushes.
ants coming from hole in
Intrig trunk I lies from

felled Pisonia filled with bird - nests and quand -

bind-nests and quandbranches badly smashed in felling.

Vial 3 - animals from
floor of Pisonia forest
mainly under sticks of
wells. Pupillies and
pale smails from under
sides of works, Tomatelinial
from fungus circul sticks.
Petatter from soil in must

Vial 119 - Insects from
general collecting - fly ins
accidental, etc. Blatting
from soil in mixed fruest.
Ents from spened coronal
in mixed frest
Applianx lahva from leaves
of I promoentuba.

Vial 120 - Caterpilla from Messerschmidia, grassligger also. atther meets from oround lights in camp.

Vial 171 - animals from under files of coronat trash - all except smails, crab, and large broken cockroach from moist trash in deftly of mixed from deftly of mixed from rubble beneath dry file near lagoon shae - found 4-6" beneath rubble surface in interstices believeen pebbles.

Bag sample 89 – Feb. 22 edpra from drying shed on Ebeju Islet.

Vials 123, 124, 125 - Blattidae from hold of 40 foot schooner owned by Ujae people collected at Ujae atolf, 7 el. 21.

to you atolo 1952 Marshall 1. 194 Feb. 20 - Bock Islet diffuse. Digitary microbachne (Prest) Hem. common locally in comment plantation count plantation gratch on frinal gravel in plantation on coconut hushr in on franches of Personighter in Pisonia Great an Pisaria rout in Primia front Soil sample # 81 fort sample 83 turface material on surface material on an and new center of nubble where comment trash west frant of islet. has decomposed for a long at least 1.5' deep, seconing 2-5" thich, black (10YR-) gradually mixed with fleched with light grains, rubble downward. Nach gray (10 YR-4/1) love crumbly silty with much humus, quite fine sand. (rample for mold + bacterigalte mount when collected. I sample for mold a bacteria foil sample #84 culture also. frespace material in part of coconut plantation near Soil sample #82 lagron rather well cleared. hurface material from bottom 6"t deep, on rubble, black of small 1 m. deep depression. 6" deep, on rubble. (10xx-2/1) mised with lighter grains, crumbly Danks brown (7.54R-3/2) fleched plastic, sitter much human, wet when collected. (sample for mold a bact, also) love, selt mixed with come sand and fine rubble. ( sample also for mold and bacteria,

Ujae atoll marshall Is. 1952 135 Feb. 23 - Rua slet (s. of Eligin) tufted, with numers Leptures refrenz (Forst.) R. Br. dominant in 2 mall oflings in mined forest in depression in center of islat black. cruston and sand in ofrening in mixed fired, interior of relet on barbs of large old messerschnidig trunk. and phrosphate cementation Sample #90 - ( rtag) beach some quano constantly well broken from westy on defratited but no lagron side of islet. accumulation. below high tide level for study of possible case hardening Lamples 92,93,94 fragments of upper layers of flat bedded sandstone from fample 91-1 - plat from mixed forest in interior central depression, depression, under Pisming errored at surface. and Terminaliza trees. For comparison with pH - 8 Tests (frusty) ranging #91-2 and also study from 5.3 to 6.5 from different of promble phosphate frants of pieces, no haler to they baristin. dementation under former conditions. fample #91-2 - prices of fample 95 - beach sand whiter layer of sandstone (rest of sample in con as trading brend) directly beneath freat I for study of possible alteration

Ujas atall 1952 Marshall Is. 137 sand and gravel, lowery Feb. 23 - Rual Islet in the north end. Haralle to the layour beach and Jan 12 - one since CL in 30-50 m, reparates coconut erab; a number by a shallow brough or of hermit wabs of several not reparaled, is a species from under rotting. broad low rounded comment logs. ridge of sand running the full Vial#1266 - bottom lager ants from colony in ground, tole layer of length of the island. Inslide this, for most or weaver from undergrowth - Rus! the inner beach of of the length, is a strip This islet is of clean of flat bedded calcareous white sand and gravel sandstine exposed which hooking award at the surface, badly for a short distance at broken up by tree roots the south end and very ( samples 91-2, -94). This SISS much at the month, here and the strip of course & running about half-way sand and fine mibble i down the seaward side, seaward of it from a broad shallow depression, where it becomes a to cobble or boulder beach. This bounded an seaward running the next of the sed by the seaward way along the seawant ridge this in the sorith side, to the southeast corner of brulder mille mixture, where there is a short and sand over the whole stretch of sand, then on the south and a stately to the middle of the rolet of broken slabs of beach as further, so are thickly rock, filed against the scattered boulders of all sizes. Unly back of the boulder beach is there a definite On the sand ridge is l'isonia frest, in the boulder udge. Etsewher south part largely replaced the peripheral ridge is of

by coconut plantation but with lisoning trees in it, mostly rather small. This comes to lagran beach but edge is filled with second! guest The comme grove and I sesoning front have no undergrowty. Pismig opere has no ground cover. Soil has grand stain but no accumulation. Fittig peat excepto locally Where found it seem. very dry and perhaps to brave been formed under different conditions. Whost of peat found is on the edge of the mixed fromest just to seaward of the sand ridge, but under Vismia tres. grund cover in comment grove is of very sparse Brenhavia, at 2. end patches of Leptuna. South passage beach fealvola-Terminalia semb with a few Messerschmidig trees. fould went of it went fayour end of it a brook of sand beach. Center part

14()

Ujus atolo 1952 marshalf Is. 143 142

Ujas atol 1952 marshall la 145 <u>\_1</u> \_1 \_1 

The inner traff of the islet, in the souther frant is mixed freet with comments scattered through it, with a fratch of l'emphis on the passage beach large ald trees, very troisted and gnowled; muxed forest - Messerschmidia, allophyllus, Terminalia, Pisonia, etc. on the unner side varying to pure cordia and frue Proma. frather end in Count gold The undergrowth in the frant where there are comments in of young exernity and is Sin places trans to penetrate. The other end is cocenit plantation locally with thickets of young evenuts and some pandanus, morinda, mean the center. a small gare of breadfuit. ground cover in the gree is grans, to in places Digitaria, in places Thuala,

slocally on the north

Marshall Is.

end telles of Polypodium and Euphordis chamissonis. On the m.e. corner a small patch of Cordia. Water is caught in drums from the bottom side of leaning comment trees, hamples from two of those, located about 1/3 to 1/4 of the way in from the lagron beach in the Irlantation showed 1600 + 1700 p.p.m. total salinity (armous text with hydrometer) Coconut trash mostly allowed to not. When it has notted for some time mikely humer accumulates in soil and between boulder on boulder flat. On northwest corner an boulder flat is a sparse semb front of feelvoly Wesserchmidia Guellarda, Visania, Intria, dr. Over the whole islet the Visamia is in flower. sometrees have lost their old leaves, some are losing Them. New leaves offear almost simultaneously.

near pt 6 (7 rung). Four

Upal atall

prob. white - capanel modely)

Teste of dry quans on leaves

all gave pt 6. One of

fresh quans had coro

much oil to give a good

test. 15 tests of quano

on back of trunk and

large brancher of

Pishnia where frigate

birds roost + white count modelie

10 pt 6

4 pt 6.5

1 pt 8

Islet n. of Eliju - seen from south; well worded mostly messerchnidia, scattered commuts in south fourth mean lagon, some tisming among and seaward of these, some heavolg along top of lagurn beach. fayon and south passage beacher very trigh of sand and gravel. may bearge there are four granable ridges longitudinally, becoming younger toward lagorn! Big Pishnia all on seemd one from sea. I may one unregetated. Howar actions.

1952 Marshall Is. Ujas atol. 155 Cananas, papayas and Information given me m squashes ("frankin") were Feb. 22 by Chief Enti: growing the when Enti was small son. all finds eaten except need heron which eat, rats. Frankallere names from Amall proposes eaten. Firs Enti: Breadfruit as baked frainy tern - mejan either underground in on booky - kalo fire, a boiled heaven cummon noddy - spijuala is March to July, which 1005.8 4 forlite enound worldy- and jagarile reef heron - kavij n'kawij" frigate bried - aak is the calm season. g 3736 g In windy season there 44133 is too much salt spray, tattler - bring plover - brokej Dis fruit. Storms come from southwest, turnstone - kontak turnstone - kut kut never from mortheast. plandanus bears fruit all year around; planted crested tern - keier" ( not seen out ident from by cutting only, when Entis description) grown from seeds bear bermit crab - oom small fruits. Those coconut erab - barn vars. used for sating (climbs trees, sometimes produce inferior leaves. lives in cornut trees) That used for leaves is names from others: sterile, is planted close frigate bird - aak together, used when red hermit col - rumer plants are small; does scorpion- meripiles not grow tall even in year. big black aut - bales Pandarin, fruit eaten large spider (lyrosis?) - panu both corked and naw. punice - tilan l'esple trère produce 30-40 ( used for sharpening kind) tens copra per quarter. I large fries of black seria () my rice, flow sugar, bismit, used for this Truspose in Bock ) milk, butter, coffee, tea, canned meat156 1952 marshell Is.

Feb. 29 - Kwayalcin Islet
34381 Physalis angulata L.

nave weed around buildings
3 22 Enteromorpha sp. (det Taylor 1955)

around a salt - water

averflow in distilling plant

or sitting, on in end of taxi-strip on asphalt. Others, very tame among installation. to erested terms frishing in lagoon near pier (and server mouth)

a few mynahs seen sattered in pains a 200 3-4 together.

grass, etc. has not suffered nearly as much from dry month of February as seen in farmary after dry wind. Damage to young community seems much more pronounced now - may be mainly dead tissue resulting from December farmary damage.

tangled berli, flowers pak yellow. teb. 28. - flight un PBM from Kwajalein & Utirih for photographing islets. (XII project). Whincellareous notes:

Filiep - West end lange islets well planted to comments. Amarken over sa itward along windward neef brave mixed semb frest. Many bare black linear islets arrows neef. (Study on vertical Alrotos odd islet pattern at this end). Islet with any fre dations glow a definite sparse and tranen aspect. Pinonia and perhaps the trees semi-leaflers, ground cover in flantations brunish green bealvold bright yellow- green, V blesser schmidig flue-geen: ( ftudy in verticals greculia reef fratterns around Fado-Filrief passage.)

Jemo - Pismia Valmost leafles. Breakers on n. w. side The reef. Cross channel pattern on reef very noticeable - simily to that on rech outside Lade - Libriet passage.

Circle - Conspicuous coral partiles maid deep parsages. Coronal plantation, Look dry and barren. canopy in the incomplete, ground cover from. much burning seen en progress, evideny Pismias almost. leaflers. Boulder ridge in western islet about squal on both side of western print.

Itinik -The western part of the south need was - lithethamion ridge. Leeward islet tras a broad strip, almost bas of comuts through center.

With reef har many elemante "incipient (?) intet;" Both send-bars, m. and in one fixed by stripps of it seals - rock to seaward.

Jaka - sand bary n.e. part not held in beach rock, is accumulation or innermost grant of broad that of reef ( covered + lightide?). hand rislet on eart held by V of beach rock. Recovered sand bas held by stry of bearlings. Un Talia Het coconuts are practically all on unner 1/3 - 1/4 of, islet. lisming gove about 2/3 of way from outer beach. Onte yz of islat a rather uniform server, except that to the north it has quite a lot of messerschmidig and to south ssattered from Visonia. Dominant in mixture seems to be fecerota. White "spider branching on photos is l'isonia.

Kroajalein - Causeway
libre cross ridge on seeten

projection should be
investigated on ground.
At least four of leeward
deep passes and that on

vinderand side e. of Koadeh

liave islets or reef patcher

inside them.
Inward curving home
of leeward islets out

sides of these prasses.

MI project wells shot

MI-44 Libriels MI-45 ailul, utirile MI-46 Jemo, Talra

Namy o ailinglapalap already done this quarter. March 1 - wine Eslet (from sea - 1 hm. +) Planted with examit to extreme ends. a narrow belt at top of beach, from east to h. w. end is along entire seaward sococh is sunt a semb freet. In southeast curve it is widest and seems to be mixed sent frest, Remander. lungely ( isoning, as it seems to de amendrat defociated. He mainder tolf Scarvola serve with some Wesserschmidig belind it. One or two short breaks an south side. Level extends, sparsely, about half-way inward on west passage beach. fearuard beach Rangly a steep boulder a pebble beach, material every coarse on east becoming fine westward - looks almost sandy at west erd. From lagron side (feb. 16) seems all planted to coconuts, locally with heavy second story of fanlans

earl of village.

Dogs
Mandarin duchs
chickens

Marshall Is. Ujas atol 165 March 2 - Ellin Islet Johny show 4 m, tall, Ximenia americana L. Vi older leaves fleshy; and two small colonies & sterile. "kalikelik". seen along lagron beach March 3 - Elsin / slet I slender treg 5 m, tall. 84 Soulamea amara L common in mixed freet in south frant of islet. shrules, diffusely 85 Lophora tornentosa L. small colony in sur branched and tangled, I'm, tal; flowers yellow. near south beach of main frant of islet. Jan #13 - hermit crabs Vial # bottom layer, in praper from Kwajalein Islet, Kwajalein atolf, Shinles animals from under bank of dead portion of Pisonia trunk, I from Wotja Islet, Ujas atol Wyn Islet, Mar. 3, in Ochrosia frect. middle layer - 9 nsects, and Elenylaming Islet, Wjas atoll, unning around an sand & sprales, general coll, Warying slit, may. 4. flat above high tide level. Vial # 129 - Ebeja Islet, mar. 8 Sy Vial # 130 - bottom layer bottom layer - ants from colony in in ochrosia from dead sticles on ground in ochrosia front (notoland Planaria) and of execut leaf. tol layer from landanus - all in top layer - general collecting atils except snails, cricket , beetle 3) both Eliza Islet, march 8. which were on dead leaves on ground ( colling Sfar#14 - large gray cral found under loose bark of on dead Pirmig Trunk in rollen coconut log and many Oshrosia forest. 1 19 and small hermit chabs from is organized freitily ent executs and A \* 14 in and around ratter eveniut ost log-ally (Erlie) Islet, mar. 12, 1952

1952 marshall ds. Vijae atall March 4 - Wortjig Islet top of Landy lagoon beach 34387) Intsig bijuga (coleh.) Kty. Densely transfed round common along beach, crowned tree 10 m, tall (dominant in places I those in forest twice as tall, umbrella-erouned); in forest inland) leaver dark green; sepals pale green, petal purplish to white, 98 Terminalia samoensis Kuch. tree 5 m, tall; flowers cream-white. rare on lagron beach, (common in scrub along fruits red when rips. passage beach) same - coral gardens just below low tide along layon beach large loose clumbs, graying green. 89 Halimeda very common a sandy and voly bottoms between 90 Hali Udoteg indica A. and E.S. Supp (det. Taylor graying green, common in crevice, and between enal clumps 91 Litholhammin epiphytis on Hatemeda 92 Herposiphonia tenella Nag (det. Taylor 1955). red elriphytis on Halimedy Udotea indica A. and E. S. Stepp (det. Taylor 1955) red 84 tentroceras claulatum (c. ag.) mont. (det. Taylor 1955) blackish, red beneath surface epiphytic on Halimeda of colony, producing abundance of gas bubbles.

found on the windward side of an islet on the windward reef. This belt is lacking on this half of this islet.

coconnit plantation mostly

yet in a lagoon side of north

plantation mostly

plantation mostly

half, near center extending

portion 3/4 way to sea, further north

white and for 100 m. or more

white in a small patch on seaway

white side near north and and

white another on southwest

by come.

around outer periphery
of south bralf is a belt
som wide of Messeschmidia
forest, rather tall, with
keaevala in edge; this
becomes mixed forest
with Pisonia, Intria landamu,
quettarda in addition to
Messeschmidia, the Intria
locally dominant, This
borest, especially along
the passage is rather spans,
with ground cover of
feptures with some Toumpetta,
etc. at edge is serub of
Jerminalia, keaevala, etc.

70 1992 marshall 9s. Ujas atol I chroma when were in a This occupies the entire south half of the islet sold stand of its own The inside the fieldheral mixed seedlings. Folally in these It is tall from not too efroto their mas be patches of Beechavin totanha or their Thurses or Golybodium. On the ground burges trees at least som, talf. francuesed sticky and It is brasically a Pismig common. White - capped frest, but locally Intria - rollies are many alm udantly ( wery dark on acrial plantos) and resting in lighting a reg talingsig have become o Miner signatures, excally dominant, or even fund is Carrieng the greened will stands. Ochrosia, once o Adri Fo Gura, in place with a started can apparently a particular person with Little account the say tout eventually replace "isonia, in the well. under Pismin, is a solid the second of the second of the Istand of who tale her a none ( in the total entry, as they in 7/ Trant 1- 2- 10 910 dech of Pismia. This always seems a moved thing tellers it stay troccu where there is Character and Conserved Street Nothing and Ochrosia to frumish An in be legged in fort from the seeds. Focally there --- ch a place pH 4.5-5 (4 texts, Truog). are shots in the Oelmosia It is dark reddish brown where the trees are yellow, (5YR-3/1-3/2), somewhat mottles and apparently in these with light grayish fleely a tree of two have dies + patches: testure fine, structure as there are offening and notting filrous, trugh, strongy, crumbly truents. Inthis frest the second when crushed. Under this is a layer about "thick of story is of sparse, of allofringely mounda young trees of a partially consolidated dominants! There is no dank from and light mottles ground cover except under material ( Lample 97-2), haid

but can be crumbled between fingers. \$ # 6-8, (2 tests, 7-way)! ? his wests on love rubble of small per Bes. The dry quans on leaver gave. pf 5.5-6 (4 tests. 7 mag), dry guano on coral pH 7 12 tests fresh quano white capped modely) fit & (I test) (all Trung) same endition but under Ochrosia instead of Vising, the soil is a clark boun (7.5 YR-3/2) crumbly fine material with some bis rubble ( fample 98), resting on love nubble. This is left & (stests, Trung)

The flies on this islet are small but numerous, persistent and annoying, seem to such blood. Acoler mosquitoes occasional.

force chichens, no pigs. Intermittently occupied house.

tel. 16, Mar. 4,5 - Ujas Bagosn Leveral times, while moving along inside the windward reef. in small fronts, linear streaks were seen, remembering oil slichs, extending inward from the neef well into the iagoon. These were numerous, extending (at least several hundred m.) to leervard, seen during period of brish tradervind, when the general surface was covered with ripples, wavelets and small waves. In these strips, from a few cm. to Im. wide, there was an alruft damping out of the surface distrubance and an recumulation of small bubbles and flecter of fram principally in the center of the nurrow etreaks. here streaks appear as though their wine small temporary oil vents along the reef. The are of different size

and ages, the older ones

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gradual", becoming thousand or harded in pattern. ( is ridly most of the atrialia man their oughn, in mentionet, in the want not all and they are observed to leeward of islet, as well as of open reeps. Obviously caused by for at least a period of time of a substance which completely changes the surface tension. The strales are remarkably stable considering the choppiness of the water - reasonably new ones being perpectly sharp for several hundred meters in from the reef, it least. age growing discernally but not sharply defined. march 9 - north of Bik Islet there streaks very prominent; with only a gently breaze they are

not straight, but a

but inequilar, and, 300

m. from the reef they are

Ujac atall (26gju 2007) 181 March 8 - small islet connected with south and of cheju covered with tall serub a low send freet of Leavola, Messerchmidis Frettanda, Ximenia a few Pandanus, ct. tapers off southward to serul 3-3 m. frigh Amosty Scarvola. Unterin is somewhat more open than outside with a few commuts. ground cover is Lafitum, and Trimbetta, bed developed in the slightly ofren place. O'me inequilarly strapes area about 4 m, with and. 7 m. long, in serie of fraevola quettarda and Virmenia is covered. more or less completely. with prumise perbler of all size, from the size of a peg to that of a man's firt. There are in places so thick as To completly hide the ground. Under these places a mass of roots has formed, making a peat-like layer, with relate 1-25" thick, with

slender shrub 4 m. talf,
forming a thicket
very difficult ! to penetrate
because of spiny dead
lower branches; weak
bitter almost oder when
erushed; fruit bright
orange yellow, pleasantly
but strongly acid
"but strongly acid

dull green when dry

chocolate from when fresh

peculiar bumps on hard surface

ujas atoll

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Vial 132 - bottom layer.

animals from under land

back on dead sapling in

Pissing grove. second layer
animals from rotten coronal

log - ally (Erlie) Islet Man. 10.

Vial 131 - bottom layer 
earthwarm from notton execut

log, ally (tilis) I slet. Mar. 10

second larger - beetles, the

weerils on plants, the other or

ground - ally I slet mar. 10.

Third layer - orb-weaver caught

on ground - ally I slet mar. 10.

single drift reedling, appeared to be drying.

Some quano spatteres about, pH tests (Turog)

5 tests dry quans on peat all pot 6. 4 tests of hard crust on surface of feat 1 pt 5, 2 pt 5.5, 1 pt 6.

4 tests of looser material 1-2 cm.

4 tests of very loose material 5-8 cm. down all bet pH 4.5 and 5.

8 tests of partially consolidated material (#110-2) -

1 pH 6.5, 2 pH 7, 5 pH 8

Explorer (etd.) beach. There are full-1

and conspicuous property. The entire lagore has

one place, just not, of

They in a strily of brach

Tede levels, & severalden

Tide level, that have been on

This larger, metty envent by severall ern, or more of love

hand when in place the refiger surfrace ratherines.

material is a frink a sine. sandstone (sample 99), which,

It is harder toward the love

tole- Ends abruptly below.

This reems to be an example of actual from time of

condition are right here that differ from nearly where me

not at all clear.

is of sand and grave (. at

widdle, for 20 m. a so

between bright and know

below broken of also don't

grantially consolidated.

sand is firm and apparent

ular, but sloping with the

stope of the beauty. The

will comble between finger.

edge, becomes very reft at

Com be drug out with machete.

beach well, but what the

steel layer is apparent and

along seaward side

is a record bett of

seculo and seculo fored,

narrow but variable

dis width compared of

feaerola, messenchmidia

White some quettarda bulana;

Teminalia and bee and

these a bedraggled cosmit

this tree. Where the belt is

narrow and the tehrica

forest approaches year

presents a very wind-buten, partly defoliated appearance. The stripped area between the two parts of this islet is mostly completely base of vegetation, is crossed, north to south, by a number (9 acc. markeill) of strips of beach-rock forme gravel,

and sand is accumulating

at the inner corners and

plants of Messerbelinidia

feptures - seedlings between the

bushes, but this mostly lead.

a thin stand of young

and Leaevols, with on The

s. w. corner, a this stand of

Mar. 11 - fangeba fact (from ship).

Mostly covered by an anostly and serub forest apparently mostly messesschmidia and feaevola, a few Pandamy, and perhaps some Pisonia.

a few fair nized patches of coconuts on lagron side.

Vegetation looks rather sparse and, at this season very dry and somewhat defoliated formewhat lover to seawed but not conspicuously 20.

Ujac atolf is continued in Book no. 33 Dag samples , soil profile

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